

Application of: Mark A. Hochwalt, et al.
Serial No.: 10/849,721
Amendment A

CLAIM AMENDMENTS

IN THE CLAIMS:

1. (Canceled).
2. (Canceled).
3. (Canceled).
4. (Canceled).
6. (Canceled).
7. (Canceled).
8. (Canceled).
9. (Canceled).
10. (Canceled).
11. (Canceled).
12. (Canceled).
13. (Canceled).
14. (Canceled).
15. (Canceled).
16. (Canceled).
17. (Canceled).
18. (Canceled).
19. (Canceled).
20. (Canceled).

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21. (Canceled).
23. (Canceled).
24. (Canceled).
25. (Canceled).
26. (Canceled).
27. (Canceled).
28. (Canceled).
29. (Canceled).
30. (Canceled).
31. (Canceled).
32. (Canceled).
33. (Canceled).
34. (Canceled).
35. (Canceled).
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38. (Canceled).
39. (Canceled).
40. (Canceled).
41. (Canceled).
42. (Canceled).
43. (Canceled).

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44. (Canceled).

45. (Canceled).

46. (Canceled).

47. (Canceled).

48. (Canceled).

49. (Canceled).

50. (New): A composition for reducing odor, the composition comprising:

at least one acid selected from the group consisting of aspartic acid, fumaric acid and mixtures thereof;

at least one synthetic zeolite having at least about 90% SiO₂ tetrahedral oxide units, a capacity for adsorbed water of not greater than about 10 weight percent when measured at 25°C and water vapor pressure at 4.6 torr, and pore apertures at least about 5.5 Å in diameter, wherein the original water of hydration has been substantially removed; and

at least one metal substance selected from the group consisting of a metal, metal salt, metal oxide, metal oxide salt and mixtures thereof.

51. (New): The composition of Claim 50 wherein the metal oxide is selected from the group consisting of zinc oxide, copper oxide, iron oxide, manganese oxide, tin oxide, silver oxide and mixtures thereof.

52. (New): The composition of Claim 50 wherein the metal is selected from the group consisting of zinc, copper, iron, manganese, tin, silver and mixtures thereof.

53. (New): The composition of Claim 50 wherein the metal salt is selected from the group consisting of a zinc salt, a copper salt, an iron salt, a manganese salt, a tin salt, a silver salt and mixtures thereof.
54. (New): The composition of claim 50 further comprising an article or substance that emits an odor during use in the absence of said composition for reducing odor.
55. (New): The composition of claim 54 wherein said article or substance is at least one item selected from the group consisting of personal care articles, foot powders, laundry preparations, pet litters, cleaning products and deodorizers.
56. (New): The composition of claim 50 comprising:
about 33% to about 99% of the acid;
about 5% to about 50% of the synthetic zeolite; and
about 0.5 % to about 40% of the metal substance.
57. (New): The composition of claim 50 comprising:
about 88% to about 89.5% of the acid;
about 9% to about 11% synthetic zeolite; and
about 0.5% to about 2% of the metal substance.
58. (New): The composition of claim 50 comprising:
about 90% to about 94% of the acid;
about 5% to about 7% of the synthetic zeolite; and
about 1 % to about 3% of the at least one metal substance.

59. (New): The composition of claim 50 wherein the acid and the metal substance combined comprise about 24% to about 99.7% of the composition and the zeolite comprises about 0.3% to about 76% of the composition.
60. (New): The composition of claim 59 wherein the acid and the metal substance combined comprise about 50% to about 98% of the composition and the zeolite comprises about 2% to about 5% of the composition.
61. (New): The composition of claim 50 further comprising a diluent.
62. (New): The composition of claim 61 wherein the diluent is sodium bicarbonate or a natural zeolite.
63. (New): The composition of claim 62 wherein the diluent is clinoptilolite.
64. (New): The composition of claim 63 comprising:
about 30% to about 38% acid;
about 1% to about 2% zeolite;
about 0.5% to about 1% ZnO; and
about 60% to about 67% clinoptilolite.
65. (New): An odor-controlled article comprising:
an article that emits odor during use in the absence of an odor controlling composition,
the article being in contact with an odor reducing composition comprising:
at least one acid selected from the group consisting of aspartic acid, fumaric acid and mixtures thereof;
at least one synthetic zeolite having at least about 90% SiO₂ tetrahedral oxide units, a

capacity for adsorbed water of not greater than about 10 weight percent when measured at 25°C and water vapor pressure at 4.6 torr, and pore apertures at least about 5.5 Å in diameter, wherein the original water of hydration has been substantially removed; and

at least one metal substance selected from the group consisting of a metal, metal salt, metal oxide, metal oxide salt and mixtures thereof.

66. (New): The odor-controlled article of claim 65 wherein the metal oxide is selected from the group consisting of zinc oxide, copper oxide, iron oxide, manganese oxide, tin oxide, silver oxide and mixtures thereof.

67. (New): The odor-controlled article of claim 65 wherein the metal is selected from the group consisting of zinc, copper, iron, manganese, tin, silver and mixtures thereof.

68. (New): The odor-controlled article of claim 65 wherein the metal salt is selected from the group consisting of a zinc salt, a copper salt, an iron salt, a manganese salt, a tin salt, a silver salt and mixtures thereof.

69. (New): The odor-controlled article of claim 65 wherein the odor-controlled article is at least one item selected from the group consisting of pads, tissue, lagoons, bandages, dressings, surgical sponges, personal care articles, cleaning products, room deodorizers, vehicle deodorizers and garbage bags.

70. (New): The odor-controlled article of claim 65 wherein the odor reducing composition comprises:

about 33% to about 99% of the acid;

about 5% to about 50% of the synthetic zeolite; and

about 0.5 % to about 40% of the metal substance.

71. (New): The odor-controlled article of claim 65 wherein the odor reducing composition comprises:

about 88% to about 89.5% of the acid;

about 9% to about 11% synthetic zeolite; and

about 0.5% to about 2% of the metal substance.

72. (New): The odor-controlled article of claim 65 wherein the odor reducing composition comprises:

about 90% to about 94% of the acid;

about 5% to about 7% of the synthetic zeolite; and

about 1 % to about 3% of the at least one metal substance.

73. (New): The odor-controlled article of claim 65 wherein the acid and the metal substance combined comprise about 24% to about 99.7% of the composition and the zeolite comprises about 0.3% to about 76% of the composition.

74. (New): The odor-controlled article of claim 73 wherein the acid and the metal substance combined comprise about 50% to about 98% of the composition and the zeolite comprises about 2% to about 5% of the composition.

75. (New): The odor-controlled article of claim 65 wherein the odor reducing composition further comprises a diluent.

76. (New): The odor-controlled article of claim 75 wherein the diluent is sodium bicarbonate or a natural zeolite.

77. (New): The odor-controlled article of claim 76 wherein the diluent is clinoptilolite.

78. (New): The odor-controlled article of claim 77 wherein the odor reducing composition comprises:

about 30% to about 38% acid;

about 1% to about 2% zeolite;

about 0.5% to about 1% ZnO; and

about 60% to about 67% clinoptilolite.

79. (New): A method for reducing odor, the method comprising contacting an effective amount of an odor reducing composition, the composition comprising;

at least one acid selected from the group consisting of aspartic acid, fumaric acid and mixtures thereof;

at least one synthetic zeolite having at least about 90% SiO₂ tetrahedral oxide units, a capacity for adsorbed water of not greater than about 10 weight percent when measured at 25°C and water vapor pressure at 4.6 torr, and pore apertures at least about 5.5 Å in diameter, wherein the original water of hydration has been substantially removed; and

at least one metal substance selected from the group consisting of a metal, metal salt, metal oxide, metal oxide salt and mixtures thereof, with an article that emits an odor during use in the absence of the odor reducing composition, for a sufficient time to effectively remove said odor; and removing said emitted odor from said odor emitting article.

80. (New): The method of claim 79 wherein the metal oxide is selected from the group consisting of zinc oxide, copper oxide, iron oxide, manganese oxide, tin oxide, silver oxide and mixtures thereof.
81. (New): The method of claim 79 wherein the metal is selected from the group consisting of zinc, copper, iron, manganese, tin, silver and mixtures thereof.
82. (New): The method of claim 79 wherein the metal salt is selected from the group consisting of a zinc salt, a copper salt, an iron salt, a manganese salt, a tin salt, a silver salt and mixtures thereof.
83. (New): The method of claim 79 wherein the odor emitting article is selected from the group consisting of pads, lagoons, tanks, animal waste, bandages, dressings, surgical sponges, catamenial devices, beef trays, poultry trays, fish trays, personal care articles, foot powders, laundry preparations, pet litters, cleaning produces, deodorizers, bedding, floors, garbage cans, diaper pails, refrigerators, vehicles and carpet.
84. (New): The method of claim 79 wherein the composition comprises:
about 33% to about 99% of the acid;
about 5% to about 50% of the synthetic zeolite; and
about 0.5 % to about 40% of the metal substance.
85. (New): The method of claim 79 wherein the composition comprises:
about 88% to about 89.5% of the acid;
about 9% to about 11% synthetic zeolite; and

about 0.5% to about 2% of the metal substance.

86. (New): The method of claim 79 wherein the composition comprises:

about 90% to about 94% of the acid;

about 5% to about 7% of the synthetic zeolite; and

about 1 % to about 3% of the at least one metal substance.

87. (New): The method of claim 79 wherein the acid and the metal substance combined

comprise about 24% to about 99.7% of the composition and the zeolite comprises

about 0.3% to about 76% of the composition.

88. (New): The method of claim 79 wherein the acid and the metal substance combined

comprise about 50% to about 98% of the composition and the zeolite comprises about

2% to about 5% of the composition.

89. (New): The method of claim 79 wherein the composition further comprises a

diluent.

90. (New): The method of claim 89 wherein the diluent is sodium bicarbonate or a

natural zeolite.

91. (New): The method of claim 90 wherein the diluent is clinoptilolite.

92. (New): The method of claim 91 wherein the composition comprises:

about 30% to about 38% acid;

about 1% to about 2% zeolite;

about 0.5% to about 1% ZnO; and

about 60% to about 67% clinoptilolite.

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93. (New): A method for removing odor from an odor emitting environment comprising: contacting an effective amount of an odor reducing composition comprising;
- at least one acid selected from the group consisting of aspartic acid, fumaric acid and mixtures thereof;
- at least one synthetic zeolite having at least about 90% SiO₂ tetrahedral oxide units, a capacity for adsorbed water of not greater than about 10 weight percent when measured at 25°C and water vapor pressure at 4.6 torr, and pore apertures at least about 5.5 Å in diameter, wherein the original water of hydration has been substantially removed; and
- at least one metal substance selected from the group consisting of a metal, metal salt, metal oxide, metal oxide salt and mixtures thereof with said odor emitting environment; and allowing a sufficient time to pass for the composition to remove the odor.
94. (New): The method of claim 93 wherein the step of contacting an effective amount of the odor reducing composition with the odor emitting environment comprises contacting the odor reducing composition, wherein the composition is contained within an article that allows for containment of the composition with the odor emitting environment.
95. (New): The method of claim 93 wherein the metal oxide is selected from the group consisting of zinc oxide, copper oxide, iron oxide, manganese oxide, tin oxide, silver oxide and mixtures thereof.

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96. (New): The method of claim 93 wherein the metal is selected from the group consisting of zinc, copper, iron, manganese, tin, silver and mixtures thereof.
97. (New): The method of claim 93 wherein the metal salt is selected from the group consisting of a zinc salt, a copper salt, an iron salt, a manganese salt, a tin salt, a silver salt and mixtures thereof.
98. (New): The method of claim 93 wherein the odor emitting article is selected from the group consisting of pads, lagoons, tanks, animal waste, bandages, dressings, surgical sponges, catamenial devices, beef trays, poultry trays, fish trays, personal care articles, foot powders, laundry preparations, pet litters, cleaning produces, deodorizers, bedding, floors, garbage cans, diaper pails, refrigerators, vehicles and carpet.
99. (New): The method of claim 93 wherein the composition comprises:
about 33% to about 99% of the acid;
about 5% to about 50% of the synthetic zeolite; and
about 0.5 % to about 40% of the metal substance.
100. (New): The method of claim 93 wherein the composition comprises:
about 88% to about 89.5% of the acid;
about 9% to about 11% synthetic zeolite; and
about 0.5% to about 2% of the metal substance.
101. (New): The method of claim 93 wherein the composition comprises:
about 90% to about 94% of the acid;

about 5% to about 7% of the synthetic zeolite; and

about 1 % to about 3% of the at least one metal substance.

102. (New): The method of claim 93 wherein the acid and the metal substance combined comprise about 24% to about 99.7% of the composition and the zeolite comprises about 0.3% to about 76% of the composition.

103. (New): The method of claim 93 wherein the acid and the metal substance combined comprise about 50% to about 98% of the composition and the zeolite comprises about 2% to about 5% of the composition.

104. (New): The method of claim 93 wherein the composition further comprises a diluent.

105. (New): The method of claim 104 wherein the diluent is sodium bicarbonate or a natural zeolite.

106. (New): The method of claim 105 wherein the diluent is clinoptilolite.

107. (New): The method of claim 106 wherein the composition comprises:

about 30% to about 38% acid;

about 1% to about 2% zeolite;

about 0.5% to about 1% ZnO; and

about 60% to about 67% clinoptilolite.